

## A PLAGUE WHICH MAY COME TO THESE ISLANDS

SAN FRANCISCO, August 28.—An ant that works its way through walls, walks with ease on water, slides down a wire, strolls into the baby's mouth, eats kittens, protects all fruit lice and kills its enemies, destroys orchards, and, in time, renders life in a community not only profitless, but intolerable, has come to California with the intention of staying. And as it has stayed everywhere else it ever visited there would be every reason to believe that it would within a few years take complete possession of the state, do away with fruit, especially oranges, render pale and sickening the brilliant flowers and make of this lovely country but a feeble imitation of itself, were it not for the fact that a young man working in a quiet, prosaic garden in East Oakland has solved the problem of its destruction.

This ant is from the tropics, but it has none of the easy going ways accredited to that clime. It is beyond all comparison the busiest little ant there ever was and would serve to point the favorite analogy. Moreover, it supports the analogy, which modern nature observers would discredit, by working with a definite purpose. As an empire builder humanity offers no parallel. It drives out all other ants before it and takes entire possession of the field. It increases at an unbelievable rate—an ordinary garden producing perhaps 100,000,000 in a summer. If left alone it will eat you out of house and home, and it is next to impossible to keep groceries out of its reach. As a house pest alone it is almost unconquerable.

The first scientist who made note of it discovered it in Argentina, but it is even more common in Brazil, and it is from that country that it migrated to America. It was met in this country for the first time on the wharves of New Orleans, having traveled from Rio Janeiro on coffee ships. That was in 1892. Nothing was done about it there until very recently, and in seventeen years it has spread over 5000 square miles in Louisiana, completely destroying the orange trees and stopping the large and flourishing cut flower industry.

Somewhere a colony was shipped in a bale of cotton from New Orleans to the plant of a cotton works at the foot of Twenty-second avenue in East Oakland about eight years ago. They immediately migrated farther, according to their restless habit, and now they have established themselves in the whole section lying between Lake Merritt and Fruitvale, from the estuary to the hills. During the unmolested years they have also secured free trips to Alameda, San Francisco, Stockton, San Jose, Los Angeles, Ontario, Riverside and other southern California points.

Until last summer California was ignorant of the menace. The communities affected had complained ineffectually of the bother of keeping away the ants, but it was not until J. C. Bradley, an entomologist connected with the University of California, gathered a few specimens and, not being able to classify them, sent the specimens to Prof. W. I. Wheeler of the American museum of natural history that the awful truth was known.

Argentine ant! It sounds portentous, and it is. Prof. C. W. Woodworth, of the college of agriculture, hearing the unpleasant news, lost no time. He made a trip to New Orleans to learn what had been done there and returned immediately to establish an experiment station in the midst of the largest colony in California, that in East Oakland. Last October he rented a house at 1133 East Twenty-second street, fitted it out with the proper apparatus, and placed assistants in charge. Little, however, could be done in the fall, as the ants were hibernating for the winter. Last February L. H. Day, formerly entomologist for San Benito county, was placed in charge of the active work by Professor Woodworth and, after months spent in studying the life habits and experimenting with poison, he has succeeded in reducing them to a few per cent. of their former numbers wherever he has worked.

His remedy is simple, easy to use and not dangerous to children, animals, birds or bees. He fills a sponge with syrup, places it in a small fruit jar, serves on the top, making a few holes in it with a nail, and sets the contrivance in the garden.

The ants, always in search of food, soon find it, and the word is passed to all the ant colonies within several hundred feet. After they have fed off the sponge for several days and a hundred million ants or so are receiving one part of their nourishment from it, he puts poison in the syrup. By this time the lines of ants from the different nests are well established and they carry away the poison to their queens. Within a few days the nests are filled with the dead.

Day had just come to the conclusion that he had solved the problem, but a few points yet to cover when he visited him at the experiment station: being a scientist, he was not ready to announce his discoveries until he could give out everything accurately, but he granted me permission to print what he had accomplished.

In the field in which he has been at work every garden and vacant lot in every square miles is the roof of an enormous ant house. The ants are everywhere. Their tiny burrows extend under every piece of ground. The magnification is staggered at their numbers in that limited territory. Their nests are so thick as to form one community of gigantic proportions. And, as there are no fends existing between families, as is usual with ants, they treat their attention solely toward work, which, from the human point of view, is destruction.

Housewives keep all food on tables which either stand in bowls of constantly changed water or suspended from the ceiling by wires wrapped in crocote-naked cloth. Even then the ants make the dangerous passage, either on the backs of the dead who recede them or on the thin dust that accumulates on water within a few feet. A crumb dropped on the floor

has a black stream passing to and from it within a minute, the scouting ants quickly discovering new forage.

But more important yet, aphids are thick on all the trees and bushes. Investigation has proved that the ants protect these from parasites and the ladybugs, and move the little lice from leaf to leaf, carrying them carefully so as to not injure them. This friendly action is due to a selfish cause, the ants preferring to all other food the honey dew excreted by the aphids. They kill the winged parasites, preventing them from laying their eggs among the eggs of the aphids, and fight the ladybugs in person, rushing them in bodies and literally rending them from limb to limb. In consequence the aphids work unmolested, and kill the trees.

Of fruits the oranges are in the greatest danger. As soon as the blossom opens, the Argentine ants swarm up the trees until each flower is black with them, and looks at a distance like a plum. They destroy all the blossoms on every tree and finish the crop before it is started. In Louisiana the orange crop was once important. Now, in the affected districts, there is none.

The ant life history, as studied by Mr. Day, showed that the larvae which had not hatched last fall hatched early this spring and that from these long dormant eggs the queens were hatched. Many drones and workers also hatched at that time, but no queens hatched later. The existing queens and the new ones then began to lay, the new ones beginning a month later than the others. All have been laying at the rate of forty eggs a day ever since May and will continue to do so all summer. As every garden has several hundred thousand queens waiting at home below the surface for the workers to bring the food and care for the larvae, the rate of increase is seen to be almost beyond reckoning. To each queen there is an average of two hundred workers.

In their domestic economy the workers attend to the eggs at all stages, nursing the larvae and carrying them from hot to cold and wet to dry places as necessary. They also bring the food. When they become dissatisfied with their surroundings, which happens frequently, they move and colonize some where else.

Queens often get the wander fever, and, forsaking their followers, set out on adventures by themselves, picking up other followers, which, being retainers by caste, will follow one queen as readily as another. The new colony establishes itself across the street or in the next garden. In this way their work is thorough, and as they leave no crack unentered, they spread rapidly.

The warmer the weather the harder the ants work, and in the middle of summer they frequently force people to close their houses and go to unaffected districts until the heat has passed.

Infants can never be left alone where there are Argentine ants, the prying little creatures lining up in rows about the child's mouth and distressing it with their bites.

There is really no effective way of keeping them from any place which attracts them except by solid construction. Kerosene on water frequently acts merely as a convenient footing upon which they can pass. The surface of fresh water is almost a sufficient support and as soon as a slight coating of dust collects they can skip across with impunity. Running water is the only effective barrier. Bands of kerosene, crude oil, tar, oils of sassafras and citronella, tree tanglefoot, zenoleum, naphthalene, coal tar disinfectants, whale oil soap, sharp edges of tin and fur have all been used as barriers without success.

As the queen often lives a dozen years, each laying 6000 eggs a summer, the increase reaches the astounding figure of 600,000 per cent. annually. Ten years, Professor Woodworth believes, will be ample time for the ants to take possession of the whole state unless something drastic is done while there is a chance.

Considering this awful possibility, the results obtained by Mr. Day are especially important. Studying the life history of the ants, he discovered two vulnerable points, one that the workers will carry poison home to the queens, and the other that the queens all hatch from the larvae which have laid undeveloped all winter. Later, he expects to find a way of destroying these brooding larvae during the winter, but at present he is confining his attention to perfecting his poisoning system.

This, as mentioned, has the distinct advantage of being easily conducted. Recently ten or more people a day have been at the experiment station to receive instructions in handling it, and the result has already been the death of untold millions of ants. If the people in the affected district in East Oakland or in any other section make a concerted effort, they can reduce the ants to 1 or 2 per cent. of what they are at present. It will take continuous action, but very little on the part of any one person.

Mr. Day's own experiments with one block will give point to this statement. When he first experimented with poison in syrup, he chose a double block in the district where the ants were thickest. There are thirty-two houses on it, with many fruit trees and large gardens. Things had reached a state where life on the block was almost intolerable. Absolutely all means to keep the ants out of the food had failed, and anything that was not eaten at bedtime was gone in the morning. The fruit blossoms had been injured and the trees were so covered with aphids that the fruit had in no case progressed beyond the first stages. It was an extreme case. The ants could hardly have been worse.

First he placed one jar containing syrup in each yard, poisoning each with arsenic after four days. Two days later there was already a noticeable decrease and many ant nests were found on investigation to be full of dead ants. Within the next few days he placed 200 jars on the block and within three weeks from the beginning of the work 90 per cent. of the ants were killed.

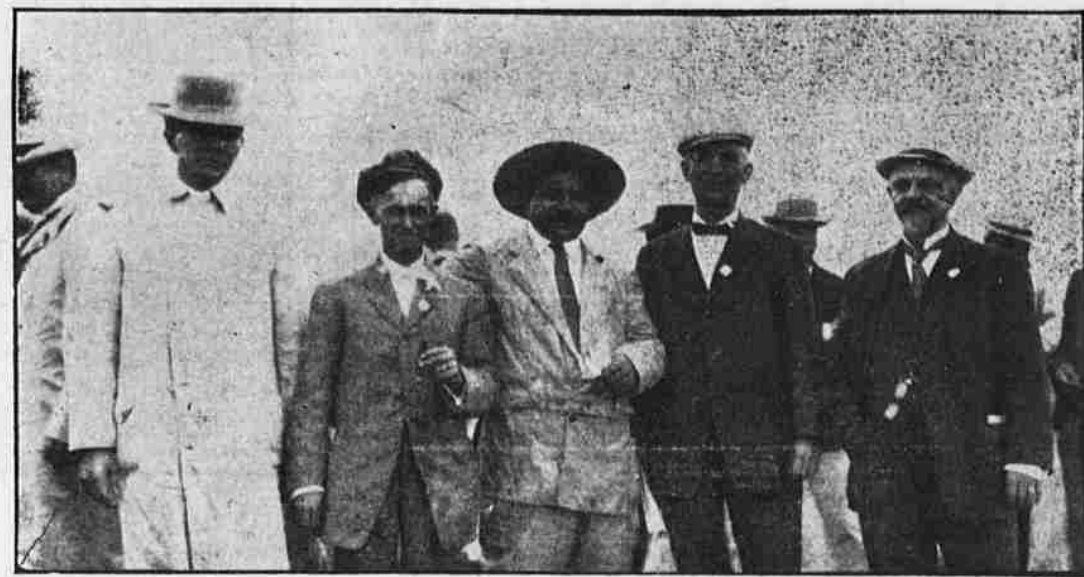
Mr. Day is now experimenting with a



CONGRESSIONAL LUAU PARTY AT FRANCIS GAY'S.

—Advertiser Photo.

J. C. Lane. Rep. Candler. Kuhio. Rep. Padgett. Rep. Bartholdt.



CONGRESSMEN AND OTHERS.

—Advertiser Photo.



REPRESENTATIVE GOOD TAKING A SNAPSHOT.

—Advertiser Photo.

formula giving the exact number of jars which should be used to the acre, when the poison should be introduced and how often the jars should be changed. Where there are fruit trees or houses to attract the ants in numbers jars forty feet apart will probably be recommended by him, exchanging jars containing only syrup for jars containing arsenic or other poison yet to be decided upon every few days for several weeks, and, after that length of time, leaving exposed the poison jars until the ants have all sought winter quarters.

In a territory like East Oakland, if the recommendations are followed, instead of being overrun with the insects, the number can be kept down to a few per cent.—hardly more than the native ants. Wherever there are fruit trees this plan will undoubtedly be followed, so that the ultimate injury to the crops will be small and the valuable orange crop, which would otherwise be wholly destroyed, will be saved.

The amount of arsenic or other poison to use has not been fully determined as yet, but it will be so small that if a child succeeded in screwing off the top of the poison jar and sucking the sponge it would probably not be injured.

As long as one queen remains the Argentine ants will be with us, so that there is little hope of absolutely annihilating them, but they can always be kept in control by the use of the poison remedy.

There are several ways of discovering whether ants are of the Argentine family. The easiest of these is to crush a few and smell their odor; if they have none they are Argentine; all other ants have a disagreeable smell when crushed. They are black, and the workers—the ones seen—are rarely above one-eleventh of an inch long.

Scientists make certain of their identity by two characteristics which no other ant has: the swelling of the waist in long and pointed instead of being almost a portion of the lower end of the body, and the arrangement of the "teeth," which are really but the rough edges of their bill-like

mouths, begin with two long "teeth," followed by three short, one long three more short, one more long, three short, two long and two short.

Louisiana did nothing to rid itself of the Argentine ant and has suffered the loss of millions. California has discovered a remedy, and it will do well to take heed of what happened in Louisiana.

### AGE NO BAR

Everybody in Honolulu is Eligible. Old people stooped with suffering, Middle age, courageously fighting, Youth protesting impatiently; Children, unable to explain; All in misery from their kidneys. Only a little backache first. Comes when you catch a cold. Or when you strain the back. Many complications follow. Urinary disorders, diabetes, Bright's disease.

Don's Kidney Pills cure backache. Cure every form of kidney ills. B. T. White, Pearl City, Oahu, Honolulu, Hawaii, says: "I am ninety-two years of age and I suffered from backache and kidney disease for eight years. I have given Don's Backache Kidney Pills a fair trial and have been so greatly benefited that I cheerfully recommend them to other kidney sufferers."

Don's Backache Kidney Pills are sold by all druggists and storekeepers at 50 cents per box (six boxes \$2.50) or will be mailed on receipt of price by the Hollister Drug Co., Honolulu, wholesale agents for the Hawaiian Islands.

Remember the name, Don's, and take no substitute.

Superintendent Marston Campbell is expected to arrive from Hawaii today, accompanied by the hydrographic experts, Messrs. Leighton and Mendenhall. The party has been doing hydrographic investigation work on the Big Island for the past ten days.

## Around the Police Station

### Tai Loy a Heavyweight.

Tai Loy, a heavyweight Chinese, was brought up before Judge Andrade yesterday on the charge of having assaulted an officer of the law. It seems that Tai Loy objected to the prominence of Captain Punohu's profile on the street and told him about it.

The genial captain merely turned his head sideways and told Loy that, if he did not quit being personal, he would be removed.

Tai Loy, not only would not refrain from his remarks, but proceeded to punch Captain Punohu in the eye. The assailant is a heavyweight Chinaman with an arm that would make the average ham look like a duckling's foot. Captain Punohu doubled up and then arrested Tai Loy.

When arraigned in court yesterday before Judge Andrade, Tai Loy was defended by Charlie Chillingworth. The big sportsman thought he had one over on Punohu when he asked in his severest tones, hiding a smile at the same time, "Did Tai Loy hurt you when he struck you?" The answer came back suavely enough, "Yes, he hurt—my feelings."

Then Judge Andrade gave sentence. He said, "Tai Loy, you are a bad one, but anybody who has the pluck to hit Captain Punohu in the eye is deserving of recognition. If you had not committed an offense I would recommend you for a medal from the Society for the Prevention of Cruelty by Police Officers. Tai Loy, you are a brave man. I would not dare to hit Captain Punohu in the eye, if I did he would doubtless kill me. Therefore you are severely reprimanded but you may go. I would advise that you get a job with the Police department. A man of your marvelous courage is needed." Then Tai Loy departed knowingly only that he had been set free.

### Ah Family in Piliikia.

The Ah family is in piliikia again. A large quantity of Ahs were up in court yesterday morning on account of their gambling instincts having got the better of them. Their cases were postponed until next Saturday morning. All of them are out on bail amounting to ten rosy iron men.

Yesterday Joe Leal went out and took in the rest of the Ah family. There was Ah Lum, Ah Leong, Ah Lung, Ah Lai, Ah You, Ah Yook, Ah Wa, Ah How, Ah Chong, Ah See, Ah Tuck and a bunch of other Ahs on a list so long that an ordinary reporter could not take them down in less than two hours and a half.

About fifteen minutes later he appeared with another \$50 in gold pieces

## VETERAN GIPSY IS HERE TO PLAY

Early this morning, soon after sun up, the Maui polo ponies will be backed up from Moanalua to Leilehua. Without exaggeration it may be said that this is the finest squad of ponies ever seen on this Island. There are new ones, veterans and intermediates that are just as good as anything here.

Amongst the bunch of twenty ponies that are here for the service of the Maui players there are several that are well known. There is Gipsy, the black mare that is said to be the headiest pony that ever played the game. David Fleming rides her and, when you have watched the two play the game, you wonder who knows more about it, David or Gipsy. The more is that much-talked of but seldom seen wonder, a relentless polo pony.

Harold Rice's Queen will appear in her ninth polo season here. She is a buckskin mare and as reliable a pony as anybody could wish for. She loves the game and plays it for all she is worth, with head, with feet and with quick response to her rider's call.

### Hawaii the Frottiest.

But perhaps the best looking pony that will be seen on the field is Frank Baldwin's Hawaii. A bay gelding bred on Kauai by Charlie Rice and broken to the game almost from his first year. Clean limbed, narrow shouldered, with a splendid poise of head, this little animal is one to draw the eye of a horseman anywhere.

With a few "pis aller" exceptions, the ponies that will be used by the different players on the Maui team are as follows:

Frank Baldwin—Hawaii, bay gelding; Koloa, grey mare; Beeswings, black mare; Forty-two, brown gelding. Harry Baldwin—Strawberry, roan mare; Prospect, roan gelding; General Bumps (Ye Veteran), roan gelding, and a black mare from Kauai.

Harold Rice—Dandy, grey gelding; Reindeer, bay gelding; Wallele, chestnut gelding; Niue, roan gelding; Myah Bird, blue roan mare; Koloa, bay gelding.

David Fleming—Gipsy, black mare; Mauu, brown mare; Venus, bay mare; Cla H., bay mare.

Yesterday morning the Maui team went out to Moanalua and had a scratch practice. They all seemed in excellent form, men and ponies alike, and old man Confidence has a mortgage on the Maui team that could not be bought at a thousand per cent.

### An Invitation Ball.

There will be an invitation polo ball at the Moana Hotel next Wednesday night after the Oahu-Maui game. The dance will commence at 9 o'clock and promises to be one of the swiftest affairs brought off in Honolulu. All the monde with a big "M" will be there, not to mention his wife and pretty daughters.

The Maui team does not look upon Saturday's game as anything very easy. They expect to win, but they are confident that they will win but they realize that they are up against heady and courageous riders and men who will play the game from start to finish.

A victory for the White Knights might be a surprise but not so much of a one as people might think from the results of the recent games. One must remember that the Fifth Cavalry team made it awful hard for Oahu in one game at Leilehua and have been practising hard ever since. It is true that they have lost two of their players since the last game but the law of compensation says that no matter how good a man goes away there is always just as good a one to take his place. Therefore we may expect to see the White Knights make it hard for the Mauians.

### CHRONIC DIARRHOEA.

Many sufferers from chronic diarrhoea have obtained prompt relief by the use of Chamberlain's Colic, Cholera and Diarrhoea Remedy. Some of the worst cases of this disease have been permanently cured by it after other treatment and skilled physicians had failed. For sale by Benson, Smith & Co., agents for the Hawaiian Islands.

Mrs. W. G. Ashley was a departing passenger on the Alameda yesterday.

and called for the release of Ah You and Ah Wa. Each time that the receipt was made out he gave a different name. First it was Sun Mo Kee, then it was Cha Fa Chat but he kept doing his errands round town until all the gamblers had been liberated on bail. If any local collection agency wants a wise boy to work for it, the management should drop on this same fat pake youth. He is a wonder.

### Straus Was Abusive.

Leon Straus had an advance of \$10 on a case paid to him and he proceeded to try and upset the distilleries. Yesterday afternoon he acted as an anchor to a telephone pole on the corner of Fort and Hotel and, when asked to move on by a policeman, he became scientifically abusive. The patrol wagon was called for and Leon went home.

### Thirty Days for Sam.

Kolapa and Samuel Davey were both sent up for thirty days yesterday. They pleaded guilty to petit larceny and will have a chance to ponder on the heat policy while doing efficient work on the roads and public parks. They both looked as though they needed exercise.

### He Could Not Buy the Brewery.

A deepwater sailor named Fredrickson started out to put the Primo beer factory on the bum. But he found that this attempt was a mere boomerang. The beer put him to the bad and he was sentenced to drive the water-wagon for thirteen months. In other words he was given a chance to get sober and ship out of Honolulu.